

Contribution to the Knowledge of the Platycerine Fauna
(Coleoptera, Lucanidae) of Central Sichuan,
Southwest China

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Abstract A new species and a new subspecies of the lucanid genus *Platycerus* are described from the central part of Sichuan Province, Southwest China, under the names *P. xiongmao* and *P. turnai sichuanus*. New records of four other species from the same area are also given.

In the present paper, two new taxa of the genus *Platycerus* from central Sichuan of Southwest China are introduced into science. One of them is a new species belonging to the group of *P. bashanicus* and the other is a new subspecies of *P. turnai*, each will be described on later pages under the names of *P. xiongmao* and *P. t. sichuanus*, respectively. New records of four other species from the same area are also given, i.e., *P. consimilis*, *P. tieguanzi*, *P. cyanidraconis* and *P. hiurai*. All but a female of *P. hiurai* from Mt. Emei Shan were collected through my field researches routinely made in recent years in collaboration with the Academia Sinica.

Before entering into the text, I wish to express my sincere thanks to Mr. FAN Ting (International Academic Exchange Center of the Academia Sinica, Chengdu) for his kind aid through my field works. Deep appreciation is due to Ms. WAN Xia (Department of Biology in Anhui University, Hefei) for kindly giving me an opportunity to examine the female specimen of *P. hiurai* deposited in the collection of the Chinese Academy of Sciences in Beijing. Also I thank Dr. Shun-Ichi UÉNO (National Museum of Nature and Science, Tokyo) for revising the manuscript of this paper.

1. *Platycerus xiongmao* IMURA, sp. nov.

(Figs. 1, 2, 4)

Male. Length (including mandibles): 9.7–10.2 mm. Body above greenish coppery with a faint reddish tinge on head, pronotum and basal parts of elytra, or coppery maroon with a faint greenish tinge along lateral margins of pronotum and elytra; venter black with a greenish metallic lustre except for abdominal sternites on which greenish lustre is much more reduced or absent; mandibles, palpi and antennae almost black or partly dark rufous, femora yellowish brown except for blackish proximal and distal ends;

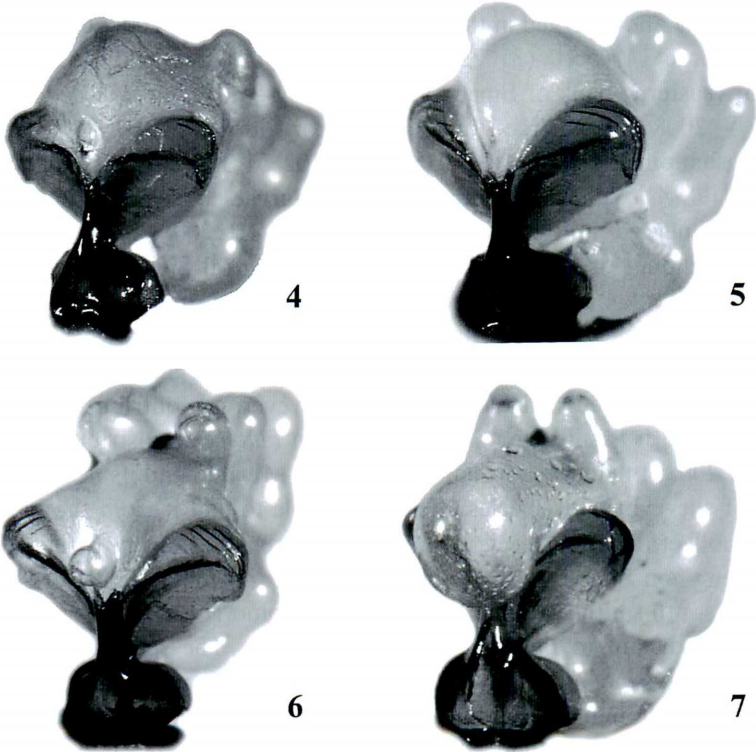
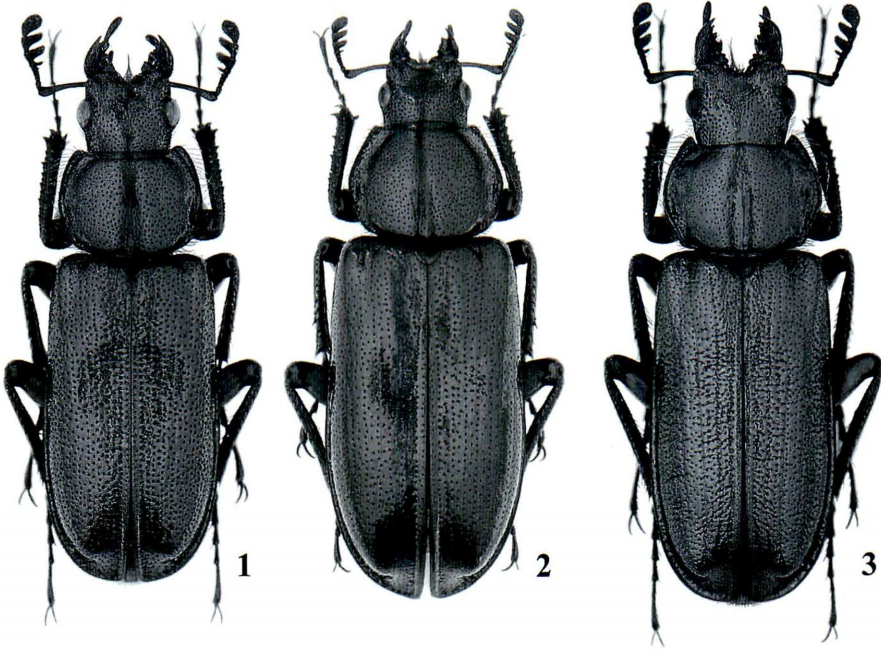
tibiae almost black, tarsi and claws dark brownish. Closely allied to *Platycerus bashanicus* described from the Daba Shan Mountains on the borders of southern Shaanxi and northern Chongqing (IMURA & TANIKADO, 1998, p. 93), but discriminated from that species in the following respects: 1) size a little smaller on an average; 2) dorsal coloration of male a little different, usually bearing red-brownish or coppery maroon tinge and never with a bluish lustre; 3) pronotum a little more transverse, 1.47–1.50 times as wide as long in male; 4) terminal plates of aedeagus smaller and shorter, more roundly arcuate in outer margin, much less remarkably wrinkled in apical portion, with the sclerotized keel on the plate nearly rectangularly set against the longitudinal median line of aedeagus; 5) a short membranous protrusion at the centre of basal part of endophallus larger and longer; 6) flagellum less strongly developed, shorter, narrower and a little less remarkably pigmented. From the remaining three species belonging to the same group, the new species is discriminated at a glance mainly by differently shaped aedeagus and endophallus of male genital organ.

Female. Length (including mandibles): 9.7–11.0 mm. Body above dark coppery or coppery with a reddish tinge; venter and appendages almost as in male, though femora are more strongly dark reddish and abdominal sternites are brownish. Barely distinguished from *P. bashanicus* by having a little more coppery reddish dorsal coloration and differently featured front angles of pronotum which are a little more weakly protruded anteriorly with the apex less sharply pointed. As regards the female, however, the difference is very small between the two species.

Type series. Holotype: ♂, below Liangshuijing [凉水井] (30°45'49"N / 102°43'35"E), 2,350–2,400 m in altitude, ca. 7 km north-northwest from Qiaoqi [桥碛], in northern Baoxing Xian [宝兴县], of Ya'an Shi [雅安市], in central Sichuan, Southwest China, 16–IV–2008, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 1 ♂, 2 ♀♀, same data as for the holotype, in coll. Y. IMURA; 1 ♂, 1 ♀, same locality, larvae collected in the field on 16–IV–2008 and emerged in the laboratory in VII–VIII–2008.

Notes. This is a second species belonging to the group of *P. bashanicus* occurring in the central part of Sichuan Province. Before this discovery, the only known representative of the same group occurring in the same area was *P. consimilis* described from Miyaluo in Li Xian which is about 100 km distant to the north from the type locality of the new species. It is worth noting that the endophallic structure of *P. xiongmao* is not similar to that of the Li Xian race but is much more closely allied to that of *P. bashanicus* whose main habitat is more than 700 km distant from the type locality

Figs. 1–7. Habitus and male genital organ of *Platycerus* spp. from China. — 1, 2, 4, *Platycerus xiongmao* from Liangshuijing in Baoxing Xian, central Sichuan (1, ♂, holotype; 2, ♀, paratype); 3, *P. turnai sichuanus* from Xindianzi in Wenchuan Xian, central Sichuan; 5, *P. bashanicus* from Mt. Guangtuo Shan in northern Chongqing; 6, *P. yeren* from Dashennongjia, western Hubei; 7, *P. consimilis* from Suoluo-gou in Li Xian, north-central Sichuan. — 1–3, Habitus in dorsal view; 4–7, apical part of aedeagus with fully inflated endophallus in subventral view.



of the new species as shown in Figs. 4, 5, 7 and 8. The collecting site of the new species lies in rather young deciduous broadleaved forest narrowly remaining on the right (eastern) bank of the upper reaches of the Dong He River. All the specimens were obtained from grey- to white rotten part of standing withered wood.

Etymology. The new specific name, *xionghmao*, means a Giant Panda (*Ailuropoda melanoleuca*) in Chinese, since the type locality of the new species, Baoxing Xian, is a historical place where this animal was discovered for the first time by a French missionary, Harman DAVID.

2. *Platycerus consimilis* TANIKADO et TABANA, 1998

(Fig. 7)

Platycerus consimilis TANIKADO et TABANA, 1998, Gekkan-Mushi, Tokyo, (333), p. 17, figs. 1 (on p. 13) & 3-8 (on p.14); type locality: Miyaluo, Li Xian, Sichuan.

Specimens examined. 1 ♀, lakeside hill of Lake Longwanghai [龙王海] (31°20' 18"-25" N / 102°57' 17-20" E), 2,900-2,950 m in altitude, in Bipeng-gou [毕棚沟] Valley, in southern Li Xian [理县], 3-V-2008; 1 ♀ (broken specimen without head and prothorax), same locality, 5-V-2008; 6 ♂♂, 8 ♀♀, same locality, larvae collected in the field on 3 & 5-V-2008 and emerged in the laboratory in VII~VIII-2008; 6 ♂♂, 5 ♀♀, below Jianzhuxia Gorge [箭竹峡], (31°22' 12" N / 102°58' 29" E), 2,600-2,650 m in altitude, on the right (eastern) bank of Bipeng-gou in Bipeng-gou Valley, larvae collected in the field on 5-V-2008 and emerged in the laboratory in VII~VIII-2008; 9 ♂♂, 8 ♀♀, below Hongshanping [红杉坪] (31°21-22' N / 102°51' E), ca. 2,850 m in altitude, in Suoluo-gou [梭罗沟] Valley, in southern Li Xian, larvae collected in the field on 5~6-V-2008 and emerged in the laboratory in VII~VIII-2008; all from Aba Zangzu Qiangzu Zizhizhou [阿坝藏族羌族自治州] in north-central Sichuan, Southwest China, collected by Y. IMURA and preserved in coll. Y. IMURA.

Notes. This species was described by TANIKADO and TABANA (1998, p. 17) based on totally 50 specimens collected from "Miyaluo, Li Xian, Sichuan" (without further detailed data on the type locality). Since then, however, no contribution has been made to this species and it is still one of the least known *Platycerus* distributed in China. In the spring of 2008, I made a short collecting trip to Miyaluo and its nearby regions with the object of surveying this species. Though unable to find it from the type locality, I was able to collect the same species from three different stations near there as recorded above. Bipeng-gou is one of the tributaries of the Zagunao He River, about 40 km distant to the south-southeast from Miyaluo, and Suoluo-gou is another tributary which is about 12 km distant to the west from Bipeng-gou. The specimens from both the localities are almost identical with topotypical *consimilis* in both external and male genitalic features, though the examples from Bipeng-gou more frequently bear a coppery or greenish coppery tinge than those from Suoluo-gou. As shown in Fig. 7, the endophallus of *P. consimilis* exhibits a peculiar development at the basal portion which

is the most noticeable diagnostic character of this species. The new collecting sites of *P. consimilis* lie in a deciduous broadleaved forest near the lake or stream, and most specimens were obtained from gray- to white rotten branch of cherry tree either protruded from the living trunk or already fallen down to the ground.

3. *Platycerus tieguanzi* IMURA, 2007

Platycerus tieguanzi IMURA, 2007, Elytra, Tokyo, **35**, p. 319; type locality: Leidongping, 2,430 m in altitude, on the northern slope of Mt. Emei Shan, of central Sichuan, Southwest China.

Specimens examined. 1 ♂, 2 ♀♀, Xilingxue Shan [西岭雪山], 2,100–2,200 m in altitude, in western Dayi Xian [大邑县], in Chengdu Shi [成都市], 10–XI–2006; 3 ♂♂, 2 ♀♀, same locality, larvae collected in the field on 10–XI–2006 and emerged in the laboratory in VII–VIII–2008; 7 ♂♂, 6 ♀♀, above Xindianzi [新店子] (30° 54' 58" N / 103° 02' 16" E), 2,400–2,500 m in altitude, on the right (southern) bank of Riv. Shaotang He [烧汤河], in southwestern Wenchuan Xian [汶川县], of Aba Zangzu Qiangzu Zizhizhou, 12–13–IV–2008; 5 ♂♂, 3 ♀♀, same locality, larvae collected in the field on 12–13–IV–2008 and emerged in the laboratory in VII–VIII–2008; 3 ♂♂ (one perfect specimen and two dead broken ones), eastern side of Mt. Erlang Shan [二郎山] (N 29° 53' 03" / E 102° 17' 42"), 2,350–2,400 m in altitude, near the southwestern corner of Tianquan Xian [天全县], in Ya'an Shi [雅安市], 18–IV–2008; 1 ♂, same locality, larvae collected in the field on 18–IV–2008 and emerged in the laboratory in VII–VIII–2008; all from central to north-central Sichuan, Southwest China, collected by Y. IMURA and preserved in coll. Y. IMURA.

Notes. This species was described very recently by myself from Mt. Emei Shan of central Sichuan (IMURA, 2007, p. 319). During my field researches made in the autumn of 2006 and spring of 2008, I was able to collect the same species from three different stations as recorded above. On Mt. Xilingxue Shan, *P. tieguanzi* is sympatric with *P. hiurai tanikadoi*. In Xindianzi of Wenchuan Xian, it is sympatric with both *P. hiurai* and *P. turnai sichuanus*. On Mt. Erlang Shan, any other species was found from the same collecting site, though another remarkable species, named *P. ladyae* (IMURA, 2005 b, p. 507), inhabits the lower altitudinal area of the same mountain range.

4. *Platycerus cyanidraconis* IMURA, 2008

Platycerus cyanidraconis IMURA, 2008, Elytra, Tokyo, **36**, p. 122, figs. 10–12; type locality: Qinlongping, 2,700–2,800 m in altitude, ca. 5.2 km south of Nanxin, on the western slope of Mt. Jiuding Shan, on the Chaping Shan Mts., in Mao Xian of north-central Sichuan, Southwest China.

Specimens examined. 4 ♂♂, above Miyalu [米亚罗] (31° 39' 48" N / 102° 47' 17" E), ca. 2,700 m in altitude, on the right (southwestern) bank of Riv. Raisu He [来苏河], in northwestern Li Xian, of Aba Zangzu Qiangzu Zizhizhou, in north-central Sichuan, Southwest China, 4–V–2008; 5 ♂♂, 3 ♀♀, same locality, larvae collected in the field on 4–V–2008 and emerged in the laboratory in VII–VIII–2008; all collected by Y. IMURA

and preserved in coll. Y. IMURA.

Notes. This species was described also very recently from the western side of Mt. Jiuding Shan on the Chaping Shan Mountains (IMURA, 2008, p. 122). During my collecting trip to Miyaluo made in the spring of 2008 for the main purpose of rediscovering *P. consimilis*, I was unable to find the aimed species but succeeded in collecting another one instead. A close examination revealed that the species in question obtained near the village of Miyaluo well agrees with *P. cyanidraconis* in both external and male genitalic features, and we now know that the distributional range of this species is not restricted to Jiuding Shan but extends more widely over the mountainous region of Li Xian, though the two ranges are divided by a large depression formed by the Minjiang River. All the specimens collected in the field were hibernating in white- or gray-rotten part of withered wood, determined most probably as *Carpinus* sp.

5. *Platycerus hiurai* TANIKADO et TABANA, 1997

Platycerus hiurai TANIKADO et TABANA, 1997, Gekkan-Mushi, Tokyo, (316), p. 7, figs. 1-b & 3 (on p. 5), figs. 9-12 (on p. 2); type locality: West of Datengding [sic] (misspelling of Dafengding [大风顶]), Weiheiluo [维黑洛] (or Weiheluo [威核洛]), Yiguoju Xiang, Meigu Xian, Sichuan.

Specimens examined. 1 ♂, Leidongping [雷洞坪], 2,430 m in altitude, on the northern slope of Mt. Emei Shan [峨眉山], in western Emeishan Shi [峨眉山市], in central Leshan Shi [乐山市], 8-XI-2006; 1 ♀, “四川峨嵋山洗象池 (Sichuan, Emei Shan, Xixiangchi) / 1800-2000 公尺 (gongchi=meter) / 中国科学院 (Chinese Academy of Sciences)” // “193(?)7. V. 25 / 采集者: 黄克仁 (collected by HUANG Ke-Ren)” // “*Platycerus / delicatulus* / LEWIS / 鉴定者: 马文珍 (determined by MA Wen-Zhen)”, preserved in the collection of the Chinese Academy of Sciences in Beijing; 1 ♂, above Xindianzi (31° 54' 58" N / 103° 02' 16" E), 2,400-2,500 m in altitude, on the right (southern) bank of Riv. Shaotang He, in southwestern Wenchuan Xian, of Aba Zangzu Qiangzu Zizhizhou, 12-IV-2008; 2 ♂♂, 1 ♀, Mofang-gou [磨房沟] (30° 10' 54" N / 102° 29' 08" E), in the upper part of Riv. Lengshui He [冷水河], ca. 2,350 m in altitude, in Laba He Nature Reserve [喇叭河自然保护区], in northwestern Tianquan Xian [天全县], in Ya'an Shi [雅安市], 15-IV-2008; 1 ♀, Pori-gou [波日沟] (30° 51' 40" N / 102° 43' 12" E), in the uppermost part of Riv. Dong He [东河], 2,950-3,000 m in altitude, on the southern slope of the Jiajin Shan [夹金山] Mts., near the northern end of Baoxing Xian [宝兴县], in Ya'an Shi, 15-IV-2008; all from central to north-central Sichuan, Southwest China. All but the Xixiangchi specimen were collected by Y. IMURA and preserved in coll. Y. IMURA.

Notes. This species was described from Meigu Xian of southern Sichuan based on a pair of specimens, and later recorded from Mt. Xilingxue Shan of Dayi Xian in central Sichuan. The latter was described as a distinct subspecies, named *tanikadoi* (IMURA, 2002, p. 20). Otherwise, however, nothing has been contributed to this species. In the past three years, I conducted extensive investigations for clarifying the platycerine fauna in the central part of Sichuan Province, and found out four new habitats of *P. hiurai* as

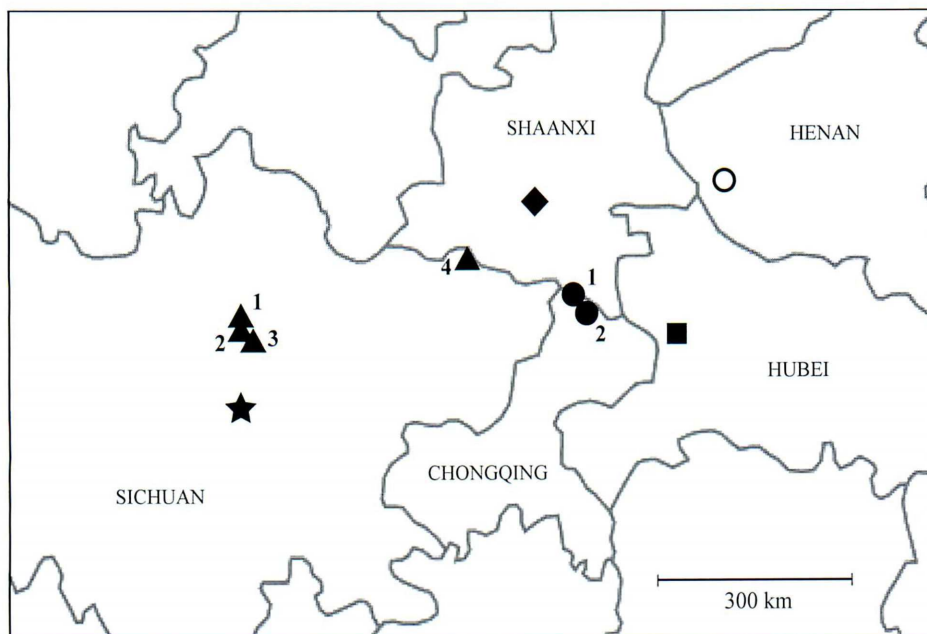


Fig. 8. Map showing the hitherto known localities of five species belonging to the group of *Platycerus bashanicus* in China. ● – *P. bashanicus* (1, Daba Shan Mts.; 2, Mt. Guangtou Shan). ○ – *P. bashanicus* ? (Fu'niu Shan Mts.). ■ – *P. yeren* (Dashennongjia). ◆ – *P. nagahatai* (Qinling Mts.). ▲ – *P. consimilis*: 1 – 3, subsp. *consimilis* (1, Miyaluo; 2, Suolou-gou; 3, Bipeng-gou); 4, subsp. *phagophilus* (Micang Shan Mts.). ★ – *P. xionghao* (Baoping Xian). “*Platycerus bashanicus*” from the Fu'niu Shan Mountains, first recorded as *P. businskyi*, is known so far only from one female specimen, and its true systematic position is still uncertain (IMURA, 2005 a, 2006 a, c).

recorded above. Since total number of the specimens now available for comparative study is still inadequate, I suspend judgment on the subspecific account for each population. Anyway, the distributional range of this species seems to extend more widely than has been expected, though the population density appears rather low at each station. The species occurs sympatrically with *P. tieguanzi* on Emei Shan, and with *P. tieguanzi* and *P. turnai sichuanus* in Xindianzi of Wenchuan Xian.

6. *Platycerus turnai sichuanus* IMURA, subsp. nov.

(Fig. 3)

Description. Length (including mandibles): ♂, 11.6–12.1 mm; ♀, 10.4–11.8 mm. Very closely allied to the nominotypical *turnai*, but distinguishable from it in the following points: 1) dorsal surface more strongly bears coppery tinge in female; 2) male mandibles shorter and smaller, less acutely hooked inwards near apices; 3) pronotal disc of male a little less strongly convex above; 4) front angles of male pronotum a little more remarkably protruded anteriad, with the tips more sharply pointed. Genital organ in

both sexes almost as in the nominotypical subspecies.

Type series. 1 ♂, above Xindianzi (31°54'58"N / 103°02'16"E), 2,400–2,500 m in altitude, on the right (southern) bank of Riv. Shaotang He, in southwestern Wenchuan Xian, of Aba Zangzu Qiangzu Zizhizhou, in central Sichuan, Southwest China, 13–IV–2008, Y. IMURA leg., to be deposited in the Department of Zoology, National Museum of Nature and Science, Tokyo. Paratypes: 1 ♂, 1 ♀, same data as for the holotype; 1 ♀, same locality, larvae collected in the field on 13–IV–2008 and emerged in the laboratory in VII–VIII–2008, in coll. Y. IMURA.

Notes. Before the discovery of the present new subspecies, we assumed that *P. turnai* (IMURA, 2001, p. 28) was the species endemic to Dashennongjia in western Hubei. It was therefore unexpected that the same species was discovered from the central part of Sichuan, which is more than 700 km distant to the west from the type locality. This discovery is important from the zoogeographical viewpoint, since it becomes the positive proof of a close faunal relationship between central Sichuan and western Hubei concerning a certain group of the genus *Platycerus*. Similar relationship was already suggested for a member of certain ground beetles. For example, a peculiar procrustimorphous carabid, *Aristocarabus*, is known from the mountainous region of central to northern Sichuan and the alpine zone of Dashennongjia, though unknown from the intermediate area. In Xindianzi of Wenchuan Xian, the present new subspecies was found, together with *P. tieguanzi* and *P. hiurai*, from deciduous broadleaved forest lying on the southern bank of the Shaotang He River. The new subspecies seems to prefer softly rotten branches lying on the forest floor as is observed in the nominotypical subspecies in Dashennongjia, while the other two species prefer white- or gray rotten cortex of withered wood either still standing or already fallen down.

要 約

井村有希: 中国四川省中部のルリクワガタに関する知見. — 中国四川省中部の宝兴県から発見されたルリクワガタ属の一種を新種と認め、パンダルリクワガタ *P. xiongmao* という名を与えて記載した. 本種はバサンルリクワガタ群に属するが、外部形態、♂交尾器形態にみられる特徴により既知の各種から識別される. また、同省中部の汶川県からトウルナルリクワガタ *P. turnai* の新亜種 *sichuanus* を記載した. 本種はこれまで、湖北省西部にある大神農架の特産種とされていたため、四川盆地を介して 700 km 以上も西方に離れた汶川県から発見されたことは、生物地理学的にみてもきわめて興味深い. ほかに、ミヤマルリクワガタ *P. consimilis*, テツカンシルリクワガタ *P. tieguanzi*, セイリュウルリクワガタ *P. cyanidraconis*, ウラクロルリクワガタ *P. hiurai* の 4 種を、同省の中ないし中北部各地からあらたに記録した.

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Color Variation of *Metallidascillus wakaharai* (Coleoptera, Dascillidae)

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Metallidascillus wakaharai SATÔ has been recorded from Laos, Thailand and Vietnam (SATÔ,